door open. We have just been pigging out. And, incredibly, with all the evidence that we are probably at or nearly at peak oil, we want to continue doing that.

They keep asking me will I vote to drill in ANWR. No, I will not. I have 10 kids, 16 grandkids, 2 great-grandkids. We, without my votes, are going to leave them the largest intergenerational debt transfer in the history of the world. Wouldn't it be nice if I left them a little energy?

By the way, I will vote to drill there when they convince me they are going to use all the energy they get from ANWR and offshore to invest in renewables, because we have a huge challenge in developing enough renewables.

The next chart, this is an interesting one. In September 2005, ''The current price of oil is in the $45 to $57 per barrel range and is expected to stay in that range for several years.'' It is now twice that, more than twice of $45. Now, this is a very thoughtful group of people that did this study, but they missed it, didn't they?

''The supply of oil is increasingly inadequate to meet the demand. Oil prices may go significantly higher.'' Indeed they have. ''And some have predicted prices ranging up to $180 a barrel in a few years. Who knows?'' We assume we will be at $100 a barrel. How long will it take to get to this $180 a barrel?

The next chart is an interesting chart. And what this shows is a number of authorities, and we can get you this list, all these A to U, nearly an alphabet of them, and when they have predicted peaking will occur. Now, some of them are really uncertain. It could be now or any time in the next hundred years. But most of them believe that it will occur very soon or there is a probability it will occur very soon. So there is wide, wide concurrence in the scientific world out there that the peaking of oil is either present or imminent. And these four major government studies, I don't have quotes here from a study done by the National Petroleum Council. They have reached essentially the same conclusions. And another one was done by the Government Accountability Office. And all four of these said essentially the same thing: Peaking is either present or imminent with potentially devastating consequences.

The next chart is just a little schematic that shows the peaking curve. By the way, you can obviously compress the abscissa and expand the ordinate and make that a very sharp curve, or you can spread it out, as we've done here, and make it a gradual curve. The significant thing is that yellow area there represents 35 years. You see, at only a 2 percent increase in use, it doubles in 35 years. It is four times bigger in 70 years. It is eight times bigger in 105 years, and it is 16 times bigger in 140 years. Well, no wonder a namesake of mine, and I wish I was his relative, who really is a bright guy, Albert Bartlett, says that the biggest failure of industrialized society is to understand the exponential function. Albert Einstein in responding to what will we find after nuclear energy, he said that the most powerful force in the universe is the power of compound interest. And that's what we see.

The next chart, and this is a really interesting one, shows on the ordinate here how happy you are with your state in life, your sense of well-being. What it shows on the abscissa here is how much energy we use. Guess where we are. We use more energy than anybody else in the world, and we're pretty happy about things. But notice that, I think, 20-some countries who use less energy than we, some of them less than half as much, feel better about their quality of life than we feel about ours. I put this slide up here to show you that we can use a whole lot less energy and still live well, still be very satisfied with our life.

The next one, and we need to come and start one of these 60 minutes we have together and just focus on this chart, because this is the future and this is where we are going. We will, of necessity, ultimately transition from fossil fuels to renewables. When the fossil fuels are gone, and one day they will be, the only argument is not whether but when. And when they are gone, we will have transitioned either smoothly because we chose the route or a really bumpy ride because we didn't plan ahead.

There are some finite resources that we can use. The finite resources include the tar sands, and previously you heard some discussion of the tar sands. They are now producing a million barrels a day. That's a lot, isn't it? But the world consumes 84 million barrels a day. We consume 21 million barrels a day. So they are producing a little bit more than 1 percent of the oil that the world uses, and they know that what they are doing is not sustainable. They will run out of water. They will run out of energy because they are now using stranded natural gas. Stranded gas is gas that is somewhere where there aren't very many people, and since it is hard to ship, they say it's stranded, and it's cheaper. So they are using stranded natural gas there in this process. What they do is have a big shovel that lifts 100 tons at a time. They dump it in a truck that hauls 400 tons, and they haul it to a big cooker where they cook it so that it is really stiff. All the volatiles will come out of that because it's near the surface, and they cook that until the oil flows, and then they add some solvents to it so it will flow at normal temperatures. And if you think of the thing they are now mining as a vein, that vein shortly ducks under an overlay so that they are going to have to develop it in situ, and they have no idea how they are going to develop it in situ. So the Canadians will tell you that what they are doing is not sustainable. They might for a bit ramp up and produce a little more, but ultimately it is certainly not sustainable.

By the way, there is a huge, huge amount of potential energy in the tar sands. One and a half times as much energy there as all the known reserves of oil in the world. It is incredibly large. But let me note to you that there is an incredible amount of energy in the tides. So just because it is there doesn't mean it is in your gas tank, and just like the tides, which are very difficult to harness, this has proved difficult to harness.

What's even more difficult to harness are the oil shales. And we have more in our West, roughly 1½ trillion barrels of oil. The world has only about 1 trillion recoverable barrels of oil in all the world. So we have one and a half times as much as all recoverable oil in the world. Then why not rest easy? Because it is enormously difficult to exploit. The Shell Oil Company was the last company that conducted a major experiment there, and they aren't certain that it is economically supportable to develop this. We put a lot of money in that in the 1970s after the Arab oil embargo, and we still are a little closer to exploitation of these shales than we were then.

Then there's coal. You've heard that we have 500 years of coal. That is just flat out not true. A more correct statement until we knew better was that we had 250 years of coal. But that's at current use rates. The National Academy of Sciences has reevaluated the data. This is not me saying it. This is the National Academy of Sciences, the most prestigious scientific organization perhaps in the world. And they have said that they have not looked at this data since 1970. That's a long time ago. In relooking at the data, they say there is probably 100 years there. But let's look at what happens if there are 250 years there. At a 2 percent growth rate, remember we talked about the 35 years it doubles, at 70 it is four times, 16 times bigger in 140 years? That now shrinks to 85 years. And if you convert some of this, if you use some of the energy to convert it to a gas or a liquid, it now shrinks to 50 years. And it is inevitable that you will share it with the world. Let me explain. If we are using liquids produced from coal, we are not buying oil; so that means that oil is available to India and China, isn't it? Energy liquid fuels are fungible. So it is inevitable we will have to share it with the world because if we are not buying the oil, someone else will. That 50 years then shrinks to 12½ years. And, by the way, if the real amount, as the National Academy says, is 100 years, then that shrinks to about 5 years. So we have 5 years of coal at 2 percent growth to be converted to a gas or a liquid and share it, as we must, with the world.

So for those who tell you rest easy, we have got this huge amount of coal, not to worry, 250 years, that's at current use rates, and they just do not understand what happens with exponential growth.

Now, back to the chart we were looking at.